FDM 19-10-1 Transmittal of Let Project PS&Es

October 26, 2015

This procedure describes the requirements for transmitting a let project PS&E to central office. Guidance for LFA agreement PS&Es is located in FDM 19-25-5. FDM 19-1-10.4 contains additional information relating to PS&E submittal timing for WisDOT and non-WisDOT projects. Direct questions to the Plans & Estimates Specialist at (608) 266-1020.

A LET project PS&E transmittal consists of an electronic plan submittal. All exhibits must be sent electronically to the BPD using eSubmit.

1.1 Accessing eSubmit

To access the WisDOT eSubmit Application you must have both of the following: 1) A valid Wisconsin User ID and password; and 2) Authorization from WisDOT.

1.1.1 Creating a Wisconsin User ID

To create a Wisconsin User ID, go to:

https://on.wisconsin.gov/WAMS/SelfRegController

and follow the instructions. Individuals, not companies, are associated with WI User IDs.

1.1.2 Requesting Authorization from WisDOT

After creating your WI User ID, send an email requesting eSubmit access to david.domabyl@dot.wi.gov and eric.arneson@dot.wi.gov. Include your full name and phone number in your request. Consultants requesting eSubmit access must also include a 2-sheet ePlan PDF with their request. Sheet 1 must be a title sheet created from scanned hardcopy. Sheet 2 must be a plan & profile sheet created from your CAD system. Both sheets must comply with FDM 15-5-10. If you have a valid WI User ID, and (consultants only) the 2-sheet ePlan complies with FDMs, you will be granted eSubmit access and a confirmation will be emailed to you.

IMPORTANT: All electronic exhibits must be free of viruses. If an infected exhibit is submitted, the submitter will receive a confirmation that it was sent. However, it will be immediately and automatically deleted and will not be accessible by WisDOT staff.

1.2 Submitting Roadway Plans with eSubmit

After you have been granted eSubmit access, you may browse to the eSubmit application at:

https://trust.dot.state.wi.us/ESubmit/

From the main “Electronic Submittal System” page, select "Roadway Plans and Exhibits". In the top section of the “Submit Roadway Plans and Exhibits” page, provide required information about the submittal.

Comments: Enter up to 80 characters of special information including any appropriate message for the recipients, i.e., Original, Revision, Insert, Advanceable Plan, Resubmittal per comments, etc. Otherwise enter “NA.”

Let Date: Select the year and month in which the project is scheduled for letting or check ExLET.

Submittal Status: Select the Submittal Status. The choices are: 30%, 60%, 90%(which are for Pre-PS&E) and Final PS&E (which is for a Final Submittal)Submittals generally include the following exhibits: ePlan, SDD Spreadsheet, Plan Letter, Environmental Commitments, Special Provisions, Time for Completion, Governor Bond, Proposal Cover, Right of Way Certification, Utility Status Report and Trns•port Estimate. Final PS&E and ExLET submittals include all exhibits.

WisDOT Office: Select the WisDOT Region Office. The choices are: Eau Claire, Green Bay, La Crosse, Madison, Rhinelander, Superior, Waukesha, Wisconsin Rapids and Operations. (For Work Share projects, select the “giving” Region).

Construction Project ID: Enter the 8-digit Construction ID using the format: 00000000. Do not enter dashes. Do not enter a Design ID. If there are multiple ID numbers shown on the title sheet of the plan, enter the lowest ID number.

Additional Project IDs: If there are multiple Construction IDs shown on the title sheet and or with the plan, enter

the lowest ID on the previous line. Enter the rest of the IDs here. Enter the IDs using the format: 00000000. Do not enter dashes. Do not enter Design IDs. Separate multiple IDs using commas. If there are no additional IDs, enter "NA."

Structures: If there are structures on the project, enter the structure numbers using the format B-00-000 for Bridges, C-00-000 for Culverts, R-00-000 for Retaining walls, S-00-000 for Sign bridges, N-00-000 for Noise barriers M-00-000 for Miscellaneous Structures and P-00-000 for Bridges with no record plans on file. Separate multiple numbers with commas. If there are no structures, enter "NA."

Route Name: Enter the route name (e.g. USH 45).

Project Name: Enter the project name (e.g. CTH Y – 10TH Avenue).

WisDOT Design Contact/Phone: Enter the WisDOT Region Office Design Contact's full name and phone number (e.g. Jane Doe / 608-334-4556).

Consultant Design Contact/Phone: If applicable, enter the Consultant Contact's firm name, full name and phone number (e.g. ABC Consulting Engineers Inc., John Buck / 608-334-4556). Otherwise, enter "NA."

In the middle section of the "Submit Roadway Plans and Exhibits" page, specify the exhibits to submit. At least one exhibit is required. See also FDM 19-10-10.

1.2.1 Naming Exhibits

Each electronic exhibit must be named using the Construction ID number, with no dashes, plus the 3-letter code shown below indicating the type of exhibit. An underbar "_" must be used between the Construction ID and the 3-letter code. See Table.1.1.

When multiple Construction IDs are shown on a single title sheet, submit all the exhibits under the lowest ID. When multiple plans with multiple title sheets are tied together, submit each plan and SDD spreadsheet individually using the appropriate ID for each.

Table 1.1 Exhibits and Requirements

Exhibit	Required Exhibit File Type and File Name (where 00000000 is the associated Construction ID)	More Information
Electronic Plan	Adobe PDF named 00000000_pln.pdf	FDM 15-5-10
Standard Detail Drawing Spreadsheet	Excel spreadsheet named 00000000_sdd.xlsm	FDM 15-5-15
Plan Letter	Word document named 00000000_ltr.doc or .docx	FDM 19-10-15
Environmental Commitments (including signed cover of environmental document)	Adobe PDF named 00000000_env.pdf	FDM 21-5-1
Special Provisions	Word document named 00000000_xyz.doc or .docx, where xyz is the region office (eau, gre, lax mad, rhi, sup, wke, wis, or ops).	FDM 19-15-1
Special Provision Insert	Word document named 00000000_ins.doc or .docx	FDM 19-15-1
Contract Time for Completion	Excel spreadsheet or Adobe PDF named 00000000_tim.xls, .xlsx or .pdf	FDM 19-10-30
Governor's Approval Form	Word document named 00000000_gov.doc or .docx	FDM 19-10-20
Proposal Cover	Word document named 00000000_pro.doc or .docx	FDM 19-10-25
Right-of-Way Certification	Adobe PDF named 00000000_row.pdf *Please (remove instructions before submitting)*	FDM 19-10-35

Utilities Status Report	Adobe PDF named 00000000_usr.pdf *(remove instructions before submitting)*	FDM 19-10-40
Project Data *(In-House Design)*	Compressed file named 00000000-c3d-proj.zip for Civil 3D project format. In File Cabinet System for MicroStation/CAiCE format.	FDM 19-10-43
Project Data *(Consultant Design)*	Compressed file named 00000000-c3d-proj.zip for Civil 3D project format, 00000000_dat.zip for CAiCE/MicroStation format.	FDM 19-10-43
Estimate	Loaded in Trns•port (PES) System	FDM 19-5-10
Proposal Level Preliminary Detail Estimate Report	Adobe PDF named 00000000_est.pdf	FDM 19-5 Exhibit 10.7
Estimate Documentation Report	Adobe PDF named 00000000_esd.pdf	FDM 19-5-5.5.3
Certificate of Coordination of Railroad Work with Highway Construction	Adobe PDF named 00000000_rrx.pdf	FDM 19-10-42

Click the Browse button in eSubmit to the right of each exhibit you wish to submit. When the “Choose file” dialog appears, browse to the exhibit on your computer or network. Repeat until you have specified all the exhibits you wish to submit.

1.2.2 Naming Special Provisions

Note that the Special Provisions are named with a 3-letter code corresponding to the applicable WisDOT Region Office as shown below.

Table 1.2 Region Office Cities and 3-Letter Codes

Region Office City	Green Bay	Eau Claire	La Crosse	Madison	Rhinelander	Superior	Waukesha	Wisconsin Rapids
Three-Letter Code	gre	eau	lax	mad	rhi	sup	wke	wis

1.2.3 Modifying Exhibits

The eSubmit system appends the Submittal Status, Date and Time to each exhibit as it is copied to the WisDOT network. This suffix serves as the exhibit revision number. The format is SSS_YYMMDD_TIME. SSS is Submittal Status (030, 060, 090 or PSE). YY is Year, MM is Month and DD is Date. Time is in 24-hour format.

For example: a PSE ePlan for project 11302072 submitted at 4:03 PM on September 16, 2005 would be named: 11302072_pln_pse_050916_1603.pdf.

When modifying exhibits, the entire exhibit must be re-submitted (except for special provisions). When modifying exhibits, include the words “revised exhibits” on the comments line.

1.2.4 Modifying Special Provisions

There are two ways to modify special provisions, inserts and revisions.

Inserts are used when there are a relatively small number of changes to the special provisions. Only the portion that is actually being changed needs to be re-submitted. Modifications should be made to special provisions using inserts whenever possible. Inserts must be named 00000000_ins.doc or docx, where 00000000 is the associated Construction ID. When submitting special provision inserts, include the words “special provision insert” on the comments line, and send an email to the special provisions editor informing her/him that an insert has been submitted.

When submitting an insert, use the document *Special Provisions Insert* and follow the directions in *Insert Guidelines* located at:

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/stsp.aspx

Preface the changes with detailed directions on where the revised language should be inserted, and, if necessary, which language in the special provisions should be deleted. For example, the directions may state “Delete paragraph three, which begins with the words “*beginning words of paragraph three,*” of the existing Utilities article and replace with the following paragraph “*text of new paragraph*.” Follow these guidelines for

preparing inserts for special provisions:

1. If changes are needed to existing articles, provide detailed directions on where the revised language should be inserted, and which language in the special provisions should be deleted. An example is: “In bid item SPV.0060.01, Cleaning and Painting Pole, delete paragraph three in section C Construction. The third paragraph begins with the words “Blast-clean the pole with...”
2. If adding an STSP, simply provide the number of the STSP. (Do not send the entire STSP.)
3. If deleting articles, provide the title of the article, NOT the article number, because articles are frequently rearranged during the review process. For example, delete the article for bid item SPV.0105.01, Remove Traffic Signals at Intersection (STH 33 and USH 12).

It is preferred that, if at all possible, changes to special provisions are submitted as an insert. However, it may be necessary when there are so many changes that the entire special provision must be re-submitted as a revision. Never submit a revision without first checking with the special provisions editor or the special provisions coordinator.

If an insert is being submitted late in the plan-review process (later than 4 weeks before the Ad Meeting date for that proposal’s letting), send an email to the special provisions engineer, angela.clary@dot.wi.gov, in addition to eSubmitting the insert. If the revision involves a change to a structures special provision, coordinate with both Bureau of Structures (BOS) and the special provisions engineer.

1.2.5 Submittal

In the bottom section of the “Roadway Plans and Exhibits” page, specify who will receive notification that the submittal was sent. An email notification is sent automatically to WisDOT staff when roadway exhibits are submitted. Recipients are determined based on the Submittal Status selected by the submitter. The email contains the same information that is included on the confirmation page. The submitter also receives a copy of the email notification. It is sent to the email address specified by the submitter at the time he/she created their Wisconsin eSubmit User ID (their extranet ID).

Under “Notify additional affected parties,” check the boxes that are applicable for the project. Email notifications will also be sent to appropriate WisDOT staff in those areas.

For workshare projects only, select the “receiving” Region.

Additional email addresses may be entered manually on the “Additional Emails” line. Separate multiple email addresses with commas.

The submitter is *required* to include their phone number as it may be different than the Contact Phone number.

Before clicking the Submit button, review the information you have entered. You will not be prompted to confirm when you press Submit. The submittal will begin immediately.

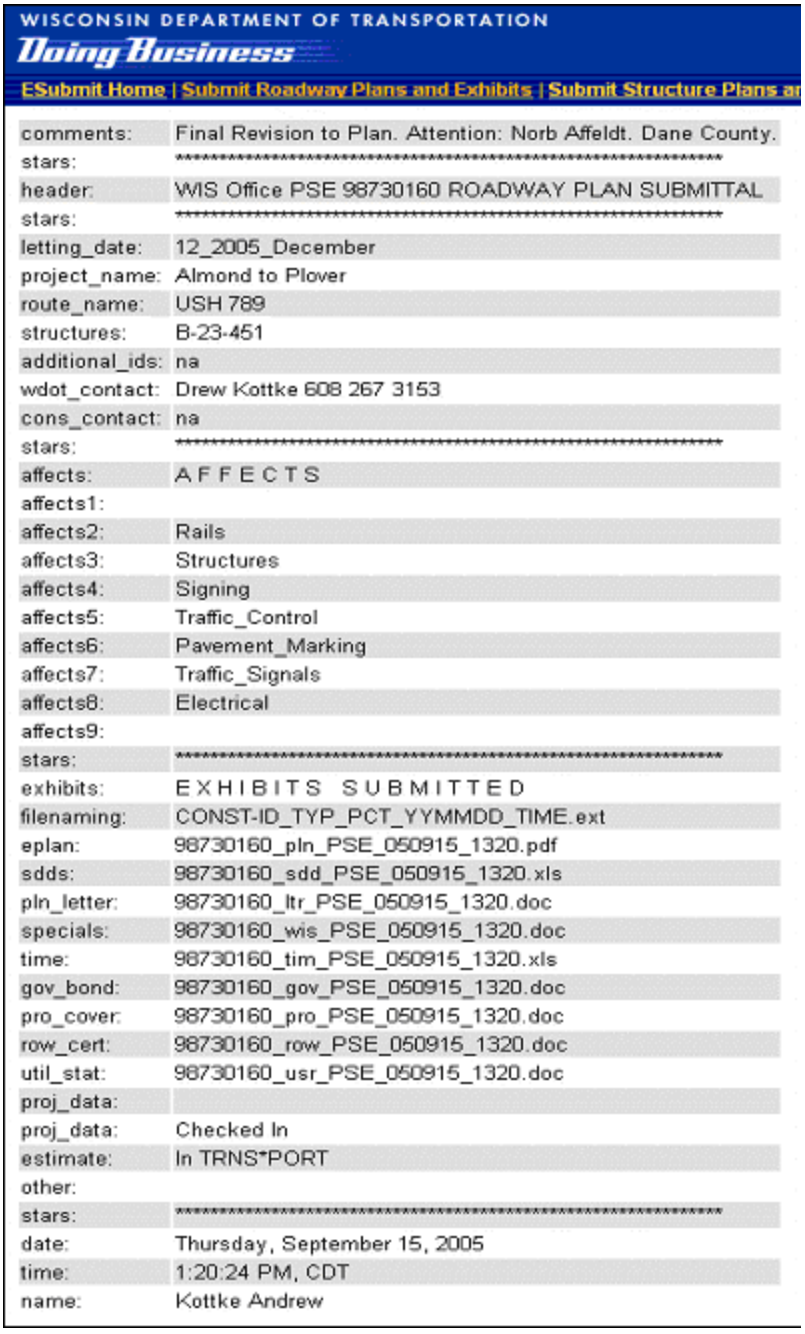
Click the Submit button once and wait. Exhibits may take several minutes to upload depending on your Internet connection speed.

When processing is complete, you will see a confirmation page like Figure 1.1. If you do not see the confirmation page, the submittal was not successful. Please attempt submittal a second time before contacting 608-266-1020 or the DOT help desk at 608-266-9434.

1.2.6 Submitting Structure Plans

Information for submitting structure plans is at:

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/strct/plan-submittal.aspx



WISCONSIN DEPARTMENT OF TRANSPORTATION

Doing Business

ESubmit Home | Submit Roadway Plans and Exhibits | Submit Structure Plans a

comments:	Final Revision to Plan. Attention: Norb Affeldt. Dane County.
stars:	**********
header:	WIS Office PSE 98730160 ROADWAY PLAN SUBMITTAL
stars:	**********
letting_date:	12_2005_December
project_name:	Almond to Plover
route_name:	USH 789
structures:	B-23-451
additional_ids:	na
wdot_contact:	Drew Kottke 608 267 3153
cons_contact:	na
stars:	**********
affects:	A F F E C T S
affects1:	
affects2:	Rails
affects3:	Structures
affects4:	Signing
affects5:	Traffic_Control
affects6:	Pavement_Marking
affects7:	Traffic_Signals
affects8:	Electrical
affects9:	
stars:	**********
exhibits:	E X H I B I T S S U B M I T T E D
filenaming:	CONST-ID_TYP_PCT_YYMMDD_TIME.ext
eplan:	98730160_pln_PSE_050915_1320.pdf
sdds:	98730160_sdd_PSE_050915_1320.xls
pln_letter:	98730160_ltr_PSE_050915_1320.doc
specials:	98730160_wis_PSE_050915_1320.doc
time:	98730160_tim_PSE_050915_1320.xls
gov_bond:	98730160_gov_PSE_050915_1320.doc
pro_cover:	98730160_pro_PSE_050915_1320.doc
row_cert:	98730160_row_PSE_050915_1320.doc
util_stat:	98730160_usr_PSE_050915_1320.doc
proj_data:	
proj_data:	Checked In
estimate:	In TRNS*PORT
other:	
stars:	**********
date:	Thursday, September 15, 2005
time:	1:20:24 PM, CDT
name:	Kottke Andrew

Figure 1.1. Sample eSubmit Confirmation Page

1.2.7 Error Messages

Review the confirmation page. Verify that it contains no error messages. Two common errors are shown below.

The error “resource not found” or “destination folder does not exist” indicates that the required destination folder at WisDOT does not exist. See Figure 1.2. Contact the individual responsible for receiving the exhibits. Verify that they are expecting your submittal and have created the appropriate folder on the WisDOT network.

stars:	**********
exhibits:	EXHIBITS SUBMITTED
filenaming:	CONST-ID_TYP_PCT_YYMMDD_TIME.ext
eplan:	**Failed to upload. Resource Not Found**
sdds:	**Failed to upload. Resource Not Found**
pln_letter:	**Failed to upload. Resource Not Found**
specials:	**Failed to upload. Resource Not Found**
time:	**Failed to upload. Resource Not Found**
gov_bond:	
pro_cover:	
row_cert:	
util_stat:	
proj_data:	
other:	
stars:	**********

Figure 1.2. Sample eSubmit Error Report

The error “File not found” indicates that the file specified cannot be found on your computer or network. See Figure 1.3. Verify that the path and filename are correct and try again. This error will also occur when an empty file (zero bytes) is specified.

fileEPlan	**Failed to upload.** N:\Bhc\EPlans\save\consult\test_data\roadway\98730160_3\98730160_pln.pdf **File not found. Please verify path and resubmit.**
fileSDD_Spreadsheet	**Failed to upload.** N:\Bhc\EPlans\save\consult\test_data\roadway\98730160_3\98730160_sdd.xls **File not found. Please verify path and resubmit.**
filePlan_Letter	**Failed to upload.** N:\Bhc\EPlans\save\consult\test_data\roadway\98730160_3\98730160_ltr.doc **File not found. Please verify path and resubmit.**
fileSpecial_Provisions	**Failed to upload.** N:\Bhc\EPlans\save\consult\test_data\roadway\98730160_3\98730160_spe.doc **File not found. Please verify path and resubmit.**
fileTime_for_Complete	**Failed to upload.** N:\Bhc\EPlans\save\consult\extranet\roadway\98730160_3\98730160_tim.xls **File not found. Please verify path and resubmit.**
comments:	na
stars:	**********

Figure 1.3. Sample eSubmit Error Report

FDM 19-10-5 Final Review

October 22, 2012

This procedure reviews steps that should be completed prior to PS&E submittal.

5.1 Approval of Plans and Grades

Approval of plans and grades shall be completed prior to the submittal of the PS&E. These approvals are covered in FDM 3-20-45. A local unit of government is required to approve plans and grades even if they are not participating in the funding.

5.2 Cost Effectiveness Finding

When a local unit of government is to construct a highway project with its own forces and equipment under a LFA agreement, a CEF shall be approved prior to submittal of the PS&E. The CEF is covered under FDM 3-20-12.

5.3 Hazardous Materials

The remediation of hazardous materials should be completed and project location certified as either within acceptable limits or free of contamination prior to letting the contract to bids where practicable. If remediation during construction would be advantageous, every effort should be made to plan for efficient coordination with construction operations. See FDM 21-35-20.

5.4 Right of Way and Encroachments

The acquisition of all right of way, including PLE, TLE construction permits and right of entry, should be completed prior to submittal of the PS&E.

The disposition of all encroachments should also be determined prior to submittal.

See Chapter 12 of this manual or the Real Estate Program Manual for detailed information.

5.5 Permits and Environmental Documents

All permits and environmental documents necessary to construct the contract should be completed prior to submittal of the PS&E. See Chapter 21 for detailed information.

5.6 Utilities and Railroads

Utility and railroad agreements, utility and railroad land interests and arrangements for moving utilities should be complete prior to submittal of the PS&E. See Chapters 17 and 18 for detailed information.

5.7 Justifications

Justifications for cattle passes or other exceptional items should be cleared prior to submittal of the PS&E. Non-standard items or requirements that do not require formal approval are to be addressed in the Plan Letter.

5.8 Proprietary Products

The use of proprietary products in a contract should be approved prior to the submittal of the PS&E. See FDM 19-1-5.

FDM 19-10-10 Required Exhibits

October 26, 2015

10.1 List of Exhibits

The following products, referred to as exhibits, comprise a final PS&E. transmittal. The exhibits submitted to the BPD vary with the type of project.

1. Electronic Plan (ePlan): Required for all transmittals. (See FDM 15-5-10)
2. Standard Detail Drawing Spreadsheet: Required for all transmittals. (See FDM 15-5-15).
3. Plan Letter: Required for all transmittals. (See FDM 19-10-15).
4. Environmental Commitments (include the signed cover of the environmental document): Required for all transmittals.
5. Special Provisions: Required for all transmittals. (See FDM 19-15-1).
6. Contract Time for Completion (Form DT1923): Required for all contracts, including agreements where the county or local units of government are doing the work with their own forces (e.g., LFA) (see FDM 19-10-30).
7. Governor Approval Form (Form DT25): Required for all projects over $5,000. (See FDM 19-10-20).
8. Proposal Cover: Highway Work Proposal (Form DT1502). Required for all LET contracts. Information concerning LFA agreements is contained in Section 25 of this chapter. Form DT1502 is available at the same location as the STSPs (see FDM 19-15-85):

   http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/stsp.aspx

   The Highway Work Proposal shall be submitted in electronic format via the e-Submit to the BPD.
9. Right of Way Cert (Form DT1899): Required for all transmittals. (See FDM 19-10-35.)
10. Utility Status Report (Form DT1080): Required for all transmittals. (See FDM 19-10-40).
11. Project Data: Required for in-house design.
12. Project Data: Required for consultant design.
13. Estimate: Required to be loaded into the Trns•port (PES) System for all transmittals (See FDM 19-5-10). LFA agreements require electronic estimates for all projects over $25,000.
14. Proposal Level Preliminary Detail Estimate Report: Required for all transmittals (See FDM 19-5 Exhibit 10.7).
15. Estimate Documentation Report: Required for all transmittals (See FDM 19-5-5.5.3).
16. Certificate of Coordination of Railroad Work with Highway Construction (form DT1804): Required for all transmittals (see FDM 19-10-42).

FDM 19-10-15 Plan Letter

October 26, 2015

A plan letter is to accompany all PS&E transmittals - including both bid contracts and force account agreements. Its objective is to provide BPD the information required to authorize the plan and process the PS&E without delays. It also informs others within the department of the transmittal and its general concepts.

The plan letter template is available at:

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/stsp.aspx

The most current version of the plan letter must be submitted at P.S. & E. stage, or the designer will be required to resubmit the letter. The plan letter contains fields for entering required information. The tab key or the up and down arrows on your keyboard allow the user to move from one field to the next field. Text can be copied from other sources and pasted into the form fields. Images and tables should not be copied into a field.

15.1 Plan Letter Contents

Attachment 15.1 shows the outline of a sample plan letter.

15.1.1 Header

The plan letter is addressed to the Chief Proposal Management Engineer, BPD, Room 601 Hill Farms. The plan letter includes in its headings, the name and title of the person who approved the PS&E submittal. For STH system projects, this person is the PDS Supervisor; for local system projects, this person is the region's Management Consultant. Also include the subject project titles as shown on the title sheet. The first project title listed must be the controlling project ID, followed by all other project titles. Also include the bid letting date and the associated design project ID.

15.1.2 Introduction

Include the following information in the introduction:

1. Project description i.e. general location and type of work. If the project involves structure work then specify what obstacle the structure is spanning (e.g. Rock River, STH 21, or C&NW Railroad)
2. Contract type (LET or, LFA agreement).
3. Alternative Contracting Methods Used. Indicate if alternative contracting methods ("enhanced" liquidated damages, interim liquidated damages, incentives/disincentives, cost plus bidding or lane rentals) will be used. Refer to FDM 19-15-2.
4. PS&E due date. One of the quarterly dates each year (February 1, May 1, August 1 and November 1) which the PS&E is intended to meet.
5. Anticipated construction start date. Obtain this from Form DT1923, Contract Time for Completion. See FDM 19-10 Attachment 30.1.
6. Anticipated All Work Complete Date:
   - For completion date contracts: Use the date in the Contract Completion Time field on the Highway Work Proposal DT1502 then add 180 calendar days to equal the Anticipated All Work Complete Date.
   - For working day or calendar day contracts: Using the working day or calendar day from the Contract Completion Time field on the Highway Work Proposal, compute the equivalent date on the Contract Time for Completion (Form DT1923), then add 180 calendar days to equal the Anticipated All Work Complete Date.
7. Name, phone number, and e-mail address of the region design contact person. For consultant design projects, also include the name, phone number and e-mail address of the Local Program Management Consultant and the consultant designer (person that stamped the plans). Contact person must be available to answer questions via phone or email after the PS&E submittal until the letting date. If contact person cannot be available during this time, arrange for a backup contact person to answer questions.
8. Name, phone number and e-mail address of the region person to contact for project information after the project is advertised for bids. Contact person must be available to answer questions via phone or email from date of advertisement until the letting date. If contact person cannot be available during this time, arrange for a backup contact person to answer questions. If contact person changes prior to advertisement, e-submit an updated plan letter with new contact information (note this revision in comment section of e-submit form) and notify BPD at (608) 267-4012.
9. National highway system. See FDM 4-1-20.2 for definition and map.

10. Prequalification should only be waived for unique projects that may have nontraditional contractors bidding on the project. Waiving bidder prequalification requires approval by the Proposal Management Chief.

15.1.3 Pre-Bid Meeting

During project development it may become apparent that extraordinary circumstances connected to the project may be difficult to communicate to the bidders in the usual project documents. When such is the case, a pre-bid meeting may be appropriate. Indicate if the pre-bid meeting is mandatory or optional. If the pre-bid meeting is mandatory it must be identified in the advertisement for bids.

A pre-bid meeting is usually of value only on projects of a unique or innovative nature, and would probably be non-productive on the more routine projects. The date, time, and location of the pre-bid meeting and the topics to be discussed should be indicated. This information will then be included in the advertisement for bids.

The pre-bid meeting shall be held at least three weeks prior to the letting.

The types of information which could be effectively furnished in this manner are: alternative contracting methods being used, new construction methods required; complex traffic handling requirements; special coordination between contractors or with others; stage construction requirements; site access restrictions during construction; etc. as project aspects may require.

15.1.4 Synopsis of Significant Approvals, Acceptances or Completed Action

Fill in date of approval, acceptance or completed action or N/A if not applicable to the project. If there is more than one date due to multiple project Ids, fill in the field with project Id and date for each Id, separated by a comma. (Example:1111-11-11 MM/DD/YYYY, 2222-22-22 MM/DD/YYYY)

For the environmental document, fill in the date of the final environmental document and select one of the following types from the drop down menu.

1 - FEIS Year & EIS No.	- Final EIS
4- FONSI	- Environmental Assessment/Finding of NO Significant Impact
2C- ER	- Environmental Report
2B- pER	- Programmatic Environmental Report
2A- CE	- No Documentation Required

15.1.5 Environmental Issues / Commitments

Note any specific commitments made to outside agencies for the purpose of mitigating environmental impacts, and state how the plans and specifications make provisions for them. Also, include the status of required permits.

If there are any commitments for which provisions have not been made, and explanation should be given.

E-submit the Environmental Commitments Sheet of the Basic Environmental Screening worksheets (include the signed cover of the environmental document) with your P.S. & E. submittal. Submit in the following format: 12345678_env.pdf. This information is forwarded to FHWA for oversight projects.

15.1.6 Permits

On projects of a type where a 401 and/or 404 permit could be required, a statement should be included to the effect that either a 404 permit is not required or that a 401 and/or 404 permit is required. If required, state what it is for, the type of permit (including Nationwide No.) and its effective and expiration dates.

If it is anticipated that project completion will extend beyond the 401 and/or 404 permit expiration date, it should be noted. A copy of the special conditions from the 401 and/or 404 permit (including those specified in the U.S. Army Corps of Engineers transmittal letter) should be included in the Environmental Commitments.

15.1.7 Right-of-Way and Utilities

Provide brief status of right-of-way acquisition and relocations (i.e., is acquisition complete? If not, when will it be completed?) or indicate their absence. Indicate if the ROW is clear of encroachments and utilities or, if not, the expected date of clearance. Identify any utility or other outside force work which will be in progress during the construction operations and may affect the contract time.

15.1.8 Sanitary Sewer and Water Main

Provide the status of DNR approval of the sanitary sewer and water main, the status of any grants or loans for these facilities, the status of rights of entry for service connections and the status of any hazardous materials issues.

15.1.9 Railroads

Identify all railroad grade separations, railroad at grade crossings and encroachments on railroad right of way that are located within the contract limits. Indicate if railroad work will be in progress during construction operations. Give the status of all railroad coordination necessary to let the proposal.

15.1.10 Hazardous Materials

Indicate if there are hazardous materials located within the ROW and what steps have been taken to remediate or clean up the contaminated site(s).

15.1.11 Design Data

Deviations from design criteria not previously approved are to be explained here. (Materials, specifications, or special items should be covered in the special provisions portion of the plan letter.)

15.1.12 Structures

List the structure numbers of all structures to be constructed under the contract (e.g., B-40-139). Also include structure numbers for sign bridges, retaining walls, noise barriers, and high mast lighting foundations.

15.1.13 Landscape Architecture

Remember to route PS&Es with landscaping to the Roadside Management Section in the BHO prior to submittal of the PS&E to the BPD. Include the date of review completion in the SoRD at the end of the plan letter.

Note all the requirements for landscape architecture. This includes:

- Aesthetic design elements for structures that have been identified under “Structures.”
- Roadside vegetation management elements:
    - Note landscape plantings to be installed under this contract or a subsequent contract.
    - Note efforts to save existing vegetation.
    - Note roadside clearing to be performed outside of the grading limits.
- Identify who will maintain the plantings after the contract has expired.

15.1.14 Traffic Signals

List all intersections where traffic signals will be constructed under the contract.

15.1.15 Traffic

State how traffic will be accommodated during construction (construction under traffic, detour, etc.). If a detour will be used explain the location and how the signing will be accomplished.

Indicate the approval date for the TMP.

Indicate the date when the Finished Traffic Control Plan & Review Meeting was held, if applicable.

15.1.16 Lighting

State whether lighting is WisDOT or locally maintained. Briefly describe the lighting system (continuous, roundabout, signalized intersections, etc.). Refer to FDM 3-10-15.3 and FDM 11-50-60.

15.1.17 Special Provisions

List only unusual standard specification modifications and unusual special items so that central office staff can identify their application to the contract. This will be needed for only those changes that are not self-explanatory or have not become a region standard modification to fit specific regional characteristics. Do not list STSP if the only modifications made were to complete the blank fields within the STSP.

15.1.18 Standardized Special Provisions

List any changes that were made to the STSPs. There is no need to list the STSP, if the only modifications made were to complete the blank fields within the STSP.

15.1.19 Plans and Proposals

Indicate the number of 11” x 17” plans and the number of sample proposals that are needed by the region or

local program manager for contract administration.

15.1.20 Sign Details

A. Local Program PS&E Submittals

1. Insert ALL sign plates (standard & special) into the plan before eSubmitting.

B. ALL Other PS&E Submittals (prior to eSubmittal)

1. Special Sign Plates. If not done prior to the 90% PS&E Review Process, request a pdf file of all special sign plates from Central Office's Bureau of Traffic Operations using the special Sign Request Form located at:

   http://dotnet/cae/signs/

   or by emailing Jason Henning at jason.henning@dot.wi.gov a minimum of three weeks prior to PS&E Submittal.

2. Standard Sign Plates. Central Office's Bureau of Traffic Operations will review the Signing and Marking portion of the 90% Plans. Be sure to include Signing and Pavement Marking as Additional Affected Parties when submitting the 90% and PS&E Plans. In the plan letter, select "required" or "not required". BTO will insert the required standard sign plates into the Final Plans.

15.1.21 Additional Special Provisions

Include a list of the ASPs (refer to FDM 19-15-90) that are to be inserted by the BPD when assembling the proposal. ASP4, 6, 7 and 9 are included with every proposal. If ASP 1 is requested, include the number of graduates and apprentices and the total number of hours requested for each category.

15.1.22 Functional Classification of Road

Specify if the road being improved is/or is not a local road or rural minor collector. Note: The functional classification of the roadway is noted in the Design Study Report (section 1.3). The functional classification determines which wage rates will be added to the proposal. Federally funded projects for roadways functionally classified as a local road or rural minor collector use state wage rates while all other functional classifications use federal wage rates.

15.1.23 Force Account Agreements

Letters for force account agreement projects must state that the submitted agreement is within the policy limits (see FDM 3-20-12). If the agreement exceeds policy limits the letter must include the date of approval of exceptions to the stated policy.

15.1.24 Conclusion

Use this section to explain any unique features of this PS&E that are not addressed in any other section of the plan letter. Indicate when special DWD wage rates are required and should be inserted in the Highway Work Proposal. If a proposal involves significant non-standard highway work such as building construction or other work effort involving non-standard highway/structure trades, the region or their consultant shall apply to DWD for the special wage rates and email these wage rates to the special provisions engineer (in the email, include the letting date, project construction ID and project title). The wage rates should also be scanned and converted to PDF files and sent electronically with the other electronic documents.

15.1.25 PS&E Review Summary

This document is a summary certification of all the reviews the PS&E has undergone from central office staff. This must be filled in for each project to be LET.

LIST OF ATTACHMENTS

Attachment 15.1 Plan Letter

FDM 19-10-20 Governors Approval Form (DT25) *October 22, 2012*

The official name for this document is the Recommendation to Governor for Contract and Bond Approval. The purpose of this form is to obtain the Governor's approval of a contract while the BPD is processing the contract itself. The BHO will create and process this form for LFA (state) contracts.

Click here to access a working copy of Form DT25 on the internet. Look under "Doing Business."

Regions shall complete this form to the extent indicated in Attachment 20.1. Regions shall submit this form as a

PS&E exhibit. In addition, the following procedures will be followed when completing this form.

1. Include any applicable federal project numbers, if known, along with state project I.D. numbers in the upper left box.
2. Do not show any values for "Contract Amount" or "WisDOT Confidential Estimate."
3. Do not fill in the "Date Let" line if there is a significant chance a project will be moved from one letting to another.
4. Bonds are required for all contracts with private contractors. Bonds are not required for contracts with other governmental agencies.
5. Fill in only the "State I.D." column of the area entitled "Project Funding Percentages." The other columns should be left blank. The BPD will complete them.
6. For the following parts of the form:

   Project(s) requested by or purpose: Please focus on the purpose of the project. Explain briefly, but with adequate detail, why this project is being constructed.

   Work consists of: A brief description of the work required for the project. Please refrain from using technical terms. Write in such a way that the common person could understand what is being stated. Use enough detail so that the reader can readily understand the relative size and scope of the project.

   Consequences if not approved: Explain briefly what would occur if the project is not constructed. For LFA agreements, the cost savings identified by the CEF must be shown. When a programmatic finding applies (see FDM 3-20-12) this must be noted also.

   The following are examples of “Consequences if not approved” for LFA agreements:

   1. For Agreements > $25,000

      Deficiency will continue and the roadbed will further deteriorate. A cost effectiveness study conducted with the (County of; City of; Town of; Village of) revealed a cost savings of $22,649.46 (12.3%) by having this work performed by the local unit of government versus private contractor.

   2. For Agreements < $25,000

      WisDOT with FHWA concurrence has determined through a programmatic cost effectiveness finding dated 8/13/98 that it is in the public interest to have the work be performed by the local governing municipality versus private contractors for projects under $25,000.

LIST OF ATTACHMENTS

Attachment 20.1 Sample of Form DT 25, Governor’s Approval Form

FDM 19-10-25 Sample Proposal

October 26, 2015

The sample proposal for a bid contract includes the following:

- Highway Work Proposal (Form DT1502) See example Attachment 25.1,
- Special Provisions (see Section 15 of this chapter),
- Additional Special Provisions (see FDM 19-15-90) that are pertinent to the contract,
- Contract language; including language that is appropriate to the funding source for the proposal.
- Appropriate wage rates.
- The Schedule of Items included in the contract.

After PS&E submittal, if funding changes are necessary, contact the Plans and Estimates Specialist at (608) 266-1020. After the proposal is assembled (day of the Ad Meeting, see FDM 19-1 Attachment 1.2), no funding changes will be allowed as contract language added to the proposal directly correlates to the proposals funding source(s).

Form DT1502 is available in MS Word format at:

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/stsp.aspx

25.1 Completing Form DT1502

- To complete the Highway Work Proposal Form, DT1502, fill in the following fields:

- County, State Project ID, Project Description, and Highway. Enter the project's description exactly as it appears in FIIPS and on the plan's title sheet. If there is more than one project in the proposal, use horizontal spaces to clearly delineate the different projects.
- Proposal Guaranty Required. Obtain the amount from the table below:

Proposal Guarantee	
Construction Cost Estimate*	**Proposal Guarantee**
0 - 75,000	$ 2,000
75,000 - 150,000	$ 6,000
150,000 - 500,000	$ 20,000
500,000 - 1,000,000	$ 40,000
1,000,000 - 5,000,000	$ 75,000
> 5,000,000	$100,000

* This amount does not include engineering and contingencies.

- Bid Submittal Due, the letting date. Do not abbreviate the month; spell out the month's complete name.
- Contract Completion Time, the number of calendar days, working days, or the completion date of the contract (see FDM 19-10-30); for example, Thirty (30) Working Days, Ninety (90) Calendar Days, or November 10, 2010.
- Type of Work. Indicate the major work classification(s) of the contract, e.g., grading, base aggregate dense, Structure (Number), concrete pavement, HMA pavement, pavement marking, permanent signing, traffic signals, lighting, ITS, and storm sewer.

The BPD will complete the federal project ID field, and will mark whether there is federal oversight on the project.

The sample proposals (contract) for LFA agreements are covered in Section 25 of this Chapter.

LIST OF ATTACHMENTS

Attachment 25.1 Sample of Completed DT1502 Form Highway Work Proposal

FDM 19-10-30 Contract Time for Completion (DT1923) *October 22, 2012*

30.1 General

A completed Contract Time for Completion (Form DT1923) is required for all bid contracts and negotiated agreements. An example is included as Attachment 30.1.

30.2 Contract Time

The contract should be analyzed in sufficient detail to determine a reasonable contract time. Contract time can be set up on the basis of working days, calendar days, or by specifying a completion date. In any case, a minimum of four to six weeks is estimated between the letting date and contract execution.

Calendar day. Every day shown on the calendar, Sundays and holidays included. This is one of the preferred methods of establishing contract time when an Interim Liquidated Damages provision is included in the contract.

To determine contract time expressed in calendar days, first estimate the number of workdays needed to prosecute the contract work. To this add Saturdays, Sundays, Holidays, and the influence of anticipated weather conditions as expressed in terms of probable working days. (See Attachment 30.2 to determine probable working days.)

Contract time shall be rounded to the nearest five days. Contract time suspensions ordered by the engineer and/or the days required for certain excluded work operations are not included within this total.

Working day. This is a calendar day, except for Saturdays, Sundays and specified legal holidays, on which weather and conditions not under the control of the contractor will permit construction operations to proceed for at least eight hours with the normal working force engaged in performing the controlling item of work which

would be in progress at this time. The controlling item is that item which must be partially or wholly completed to permit progress essential to complete the contract within the number of working days allowed. See Standard Specification 108.12 for construction details related to working day contracts.

The working days method is preferred for establishing contract time for a normal construction project. Working day contracts equitably provide for those projects where relatively minor weather changes greatly influence work progress, or where there are frequent delays occasioned by other contracts, material delivery, or operations beyond the contractor's effective control.

Contract time shall be rounded to the nearest five days.

Completion date. The calendar date shown in the proposal on or before which the work contemplated in the contract shall be completed. No time extension allowances are made for normal delays or lack of progress.

A completion date is preferred when an Incentive/Disincentive provision is used in the contract.

A completion date contract should be considered in any of the following situations:

1. When stage construction contracts must closely follow one another to meet a desired open-to-traffic date.
2. When the timing of a special event is the critical factor in determining the desired completion date.
3. When the contract work is expected to extend over multiple construction seasons.
4. When the Interim Liquidated Damages provision is included in the contract.

Designers should avoid requiring unjustifiably high rates of operation progress through improper selection of an early completion date. The normal procedure is to select the completion date from a working day type time analysis, taking into consideration the desired reasons for specifying the use of a completion date.

30.3 Factors Influencing Contract Time

Holidays shall be New Years Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Eve Day, Christmas Day and New Year's Eve Day.

Probable working days in a month are the possible weekdays available for work multiplied by a percentage factor based on past experience for the major construction operation being performed. A percentage factor chart is included as Attachment 30.2 of this procedure. It may be used directly or with minor modification to reflect regional weather conditions. The possible working days in a month are the total number of calendar days minus any Saturdays, Sundays and holidays that occur during that month.

Production Rates. The production rates should be tailored to meet the conditions of each individual contract. Consideration should be given to the size of work areas, time of year constructed, congestion due to traffic, etc. See Attachment 30.3 for estimated average production rates.

Utility and railroad adjustments are usually planned to occur prior to construction operations to avoid interfering with the contractor's construction schedule. Occasionally, utility or railroad facility adjustments must be performed during construction operations. If there is good reason to believe that these adjustments may delay the contractor, time should be added to the contract time for completion. The district utility or railroad coordinator should be consulted as necessary.

Temporary structures. When a temporary structure is required to keep the highway open to traffic, a sufficient amount of time should be included in the contract time for the construction of the temporary structure. This time should be shown on the contract time chart.

Curing and protection of concrete. Include the contract time required to ensure concrete is sufficiently cured and has developed adequate strength to support subsequent construction operations without damage to in-place work. Also include time required before bridge decks can be sealed.

Exclusion From Contract Time Charge

Operations excluded from the contract time charges are those occurring prior to and following the major operations of the contract, a brief list of these is as follows:

1. Construction Staking, initial layout before grading work begins.
2. Move-in of equipment by the contractor.
3. Clearing, grubbing, stripping and subsequent final clean-up of aggregate pits or quarries, borrow or subbase pits.

4. Delivery, installation and removal of temporary traffic control devices.
5. Exploratory digging of test holes.
6. Construction, maintenance and subsequent obliteration of access roads to pits or quarries.
7. Setting up and dismantling of crushing, asphaltic or concrete batching or mixing plants.
8. Preliminary blasting or crushing for test samples.
9. Watering sod, when performed after completion of all sod replacement and all other construction work is completed. The 10-day watering requirement remains in effect, however.
10. The production of aggregate stockpiles when no other work is in progress nor has been ordered to start.
11. Repairs to equipment performed at the work site prior to the start of work during official suspension or after contract work is completed.

LIST OF ATTACHMENTS

Attachment 30.1	Sample of Form DT1923, Contract Time for Completion
Attachment 30.2	Percentage Factors for Probable Working Days
Attachment 30.3	Estimated Production Rates for Computing contract Time

FDM 19-10-35 Certificate of Right of Way (DT1899) *July 28, 2011*

The FHWA has established rules and regulations that must be followed by state and local agencies when acquiring highway right of way where federal aid funds are used. A Certificate of Right of Way (form DT1899) shall always accompany the PS&E transmittal. Note: At the time of this writing, an additional step is being implemented on a trial basis where an exception report is being required at the time of the PS&E to try and address any issues that may prevent a project from meeting all requirements for advertisement and letting. See FDM 19-1-3 for more about the project letting process.

** When finished filling in the DT1899. Please convert to a PDF per instructions on the bottom of the form.

35.1 Right-of-Way Clearance

The status of ROW is reported using the Certificate of Right of Way (form DT1899). Attachment 35.1 shows a copy of this form with detailed instructions for completing. An electronic copy of this form is available from the Real Estate Program Manual (REPM) at

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/re/repm.aspx

The top half of this form (see items marked #1 – 17 on Attachment 35.1) is always completed by the organization that is designing the project (either the region or the consultant); however, only WisDOT is authorized to verify and approve the information given. Further processing of this form depends upon the project circumstances.

35.1.1 No New ROW Required

If there is no new land interest being acquired (either permanent or temporary), then the regional project development unit representative should check the appropriate box and type their name in Section 15. Only WisDOT is authorized to verify and approve the information given on the certification. The form should then be added to the PS&E package.

35.1.2 New ROW Is Required

If the project does require the acquisition of new land interests (either permanent or temporary) then the regional project development unit representative should check the appropriate box and type their name in Section 15. Only WisDOT is authorized to verify and approve the information given on the certification. The form should then be sent to the regional technical services real estate unit for completion of Sections 16 - 21. The responsible regional real estate representative will fill in their name in Section 21. Only WisDOT is authorized to verify and approve the information given on the certification. When all sections have been completed the form should be added to the PS&E on-line transmittals in accordance with FDM 19-10-1.

LIST OF ATTACHMENTS

Attachment 35.1	Certificate of Right of Way

FDM 19-10-40 Utilities Status Report (DT1080) July 28, 2011

The information contained in the utility status report (USR) (Form DT1080) provides data relative to utility facilities within the project and the status of utility parcels and agreements. See FDM 18-10-40 for guidance on creating a USR and a sample of one.

When finished filling in the DT1080. Please convert to a PDF per instructions on the bottom of the form.

40.1 Utility Clearance

The utilities status is reported by the region. The status of non-parcel utility facilities should also be included. Where utility adjustments or relocations have been performed prior to the PS&E. transmittal date, the special provisions should contain current information.

FDM 19-10-42 Certification of Railroad Coordination with Highway Construction October 26, 2015

A Certificate of Coordination of Railroad Work with Highway Construction (DT1804) is required for all project PS&E submittals regardless of if there are railroad impacts.

The Regional Railroad Coordinator and/or the WisDOT Project Manager are responsible for completing the DT1804 form at P.S.&E. The Regional Railroad Coordinator shall sign the DT 1804. The Railroads and Harbor Section (RHS) within the Bureau of Transit, Local Roads, Railroads, and Harbors (BTLRRH) will review the DT1804 prior to clearing the project within psetrak.

Convert the completed DT1804 form to a PDF prior to eSubmitting. A sample certificate is included as Attachment 42.1.

LIST OF ATTACHMENTS

Attachment 42.1 Sample Certificate of Coordination of Railroad Work With Highway Construction

FDM 19-10-43 Digital Data Exchange and Project Data Awareness July 23, 2015

43.1 General

This procedure describes the requirements for submitting digital highway project data, the procedure for archiving the project data and for creating the contractor data packet (detailed in CMM 7-10.3) and archiving the project. All questions about the content of this procedure should be directed to Methods Development at support.cae@dot.wi.gov.

43.1.1 Application

The requirements of this procedure apply only to projects on the state trunk highway system. For consultant-designed projects, these requirements apply to two-party contracts only.

- Projects that have solicitation dates and FIIPS Life Cycle set to 11 (for internal projects, FIIPS Life Cycle set to 11) before July 1, 2014 can submit project data either in MicroStation/CAiCE or AutoCAD Civil 3D formats.
- Projects that have solicitation dates and FIIPS Life Cycle set to 11 (for internal projects, FIIPS Life Cycle set to 11) after July 1, 2014 shall submit digital data in Civil 3D formats and be developed in AutoCAD Civil 3D software.

43.1.2 AutoCAD Civil 3D Mandate Notification

The use of AutoCAD Civil 3D software and file formats native to it will be required on most highway projects. Further information is included in Attachment 43.7.

43.2 Introduction

Digital Data Exchange provides a way to transfer highway project data, using standard formats, which allows the reuse of information in engineering software, versus the recreation of information.

43.3 Digital Data Submittal

Regions can comply with the requirements of this procedure (i.e., creating the contractor staking packet and project archive) by placing the appropriate electronic data files in the CADDS electronic filing cabinet at the time of PS&E submittal. No physical document need be sent to central office as part of the P. S. & E. submittal.

43.3.1 AutoCAD Civil 3D Project Data Submittal

After the PS&E has been reviewed and corrected, consultants shall submit the entire Civil 3D project directly to the regions. The Civil 3D project shall be zipped into a single file and named <DesignID>-c3d-proj.zip. The Civil 3D project folder should be the top folder within the zip file.

Example: Civil 3D project named 00000000 should be archived to 00000000-c3d-proj.zip.

All data types required by this procedure shall be on a single portable electronic media device compatible with Microsoft Windows. Media with a USB connector or read on CD or DVD optical drive are acceptable. Media on blu-ray discs is not acceptable. The consultant must maintain a copy of the data that is submitted. The consultant must check the data for accuracy and certify it to be correct before delivery to the region. The project archive shall also contain a meta-data document that lists all files contained on the disc. An electronic copy of the meta-data document template can be found within the Civil 3D project template. A copy of this template is shown in Attachment 43.1.

Regions shall not forward the consultant project data disc to central office. Instead, the region shall perform the file check-in process by verifying that the necessary data is on the CD and entering the project data files into the CADDS electronic filing cabinet.

43.3.2 MicroStation/CAiCE Data Submittal

Consultants shall submit a preliminary list of electronic data files to the region when they submit their PS&E. This list will identify the files they intend to submit after the PS&E is checked and corrected. This file list should use the same format as the meta-data document that must accompany the actual file submittal.

The region must provide feedback to the consultant on any additional files that are needed but were not shown on the preliminary list. After the PS&E has been reviewed and corrected, consultants shall submit the electronic project data files on a single portable electronic media device directly to the regions.

All data types required by this procedure shall be on a single portable electronic media device compatible with Windows. Media with a USB connector or read on CD or DVD optical drive are acceptable. Media on blu-ray discs is not acceptable. The consultant must maintain a copy of the data that is submitted. The consultant must check the data for accuracy and certify it to be correct before delivery to the region. The disc shall also contain a meta-data document that lists all files contained on the disc. An electronic copy of the meta-data document template can be downloaded from the WisDOT's ftp site at:

ftp://ftp.dot.wi.gov/dtsd/bpd/methods/caice

A copy of this template is shown in Attachment 43.6.

Regions shall not forward the consultant project data disc to central office. Instead, the region shall perform the file check-in process by verifying that the necessary data is on the CD and entering the project data files into the CADDS electronic filing cabinet.

43.4 File Formats

43.4.1 AutoCAD Civil 3D DWG Specifications and Parameters

All files submitted as Civil 3D DWG shall be fully compatible with AutoCAD Civil 3D 2014 or earlier. Files shall be created from file templates provided by WisDOT. These can be found at:

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/cad/civil-3d.aspx

The following table describes further information for requirements and options within an AutoCAD Civil 3D DWG.

Table 43.1 WisDOT AutoCAD Civil 3D DWG Feature Requirements and Options

Feature/Object	Requirements/Options
Layers	Custom layers that are based on standard layers to allow for finer control of data are allowed. Example: The custom layer P_ALI_STH25 could be created based on the layer P_ALI.
Linetypes and fonts	Only WisDOT-provided linetypes and fonts shall be used.
Text, dimension, multi-leader, ACAD table, Civil 3D label, and Civil 3D table styles	Custom text-based styles that use WisDOT layers, linetypes, and fonts are allowed.
Blocks	Custom blocks that use WisDOT layers, linetypes, and fonts are allowed.
Layouts	Layouts used in plan sheets shall be created from WisDOT layout templates.
Non-survey Civil 3D object styles	Custom styles for non-survey Civil 3D objects that use standard layers, linetypes, and fonts are allowed.
Civil 3D survey points, survey figures, point description key sets, and figure prefix database	Only WisDOT-provided settings for survey databases, description keys, and styles for survey points and figures shall be used.
Plot styles	Only WisDOT-provided plot style tables shall be used for plan sheet plotting.
Pipe network catalogs and part lists	Only Autodesk-provided or WisDOT-provided pipe network catalog and parts shall be used. Pipe network part catalog shall be submitted.
Subassemblies	Subassemblies provided by Autodesk and WisDOT are acceptable. Custom subassemblies are acceptable with the following requirements: The custom subassembly is developed in Autodesk Subassembly Composer. The pkt file for all custom subassemblies is included along with each project delivery that uses the custom subassemblies. The subassembly follows established naming conventions for point, link, and shape codes. See WisDOT and Autodesk subassembly help file code diagrams for more information on established corridor code naming conventions. Custom subassemblies used on WisDOT projects are part of the project data submittal. Intellectual property rights associated with the custom subassembly are forfeited. The Department assumes full ownership rights of the subassembly. WisDOT may use the subassembly on any future project. WisDOT may openly share the custom subassembly with the public, including it in the Civil 3D standards files packages for distribution. Help documentation structured in a fashion similar to WisDOT subassembly help files shall be submitted. Help files must be delivered in Word docx format.

DWG References

Data connections within a Civil 3D project shall be intact upon delivery to the Department. To ensure this, all xreferences between files in a Civil 3D project shall be relative and not full path or no path. Also, unless there is a specific reason to do otherwise, xreferences should be of an overlay type and not an attachment type to avoid circular references.

Coordinate projection information

The coordinate projection used for the project shall be set on all DWGs.

43.4.2 MicroStation DWG Specifications and Parameters

All files submitted as DGN format shall be fully compatible with MicroStation v8. All design files must be 2D unless explicitly requested otherwise. The graphical data provided by the DOT may be in MicroStation version J7.1 or version 8 DGN format.

The compilation of photogrammetric mapping and DTM data shall be in MicroStation 3D files. These files shall be converted to 2D and the DTM data shall be stripped from the files to deliver the mapping data for design.

Design file working units shall be 1:1000:1. For English-based plans the master unit is the survey foot and the

sub unit is 0.001 ft.

The global origin (0,0) of design files shall be at x = 0, y = 0, z = 2147483.648 for MicroStation files. The graphical data must be coordinate correct in the applicable coordinate system drawn at a 1 to 1 scale. This does not apply to non-geographical drawings such as typical sections, standard details and cross section sheets. Project design files, as noted elsewhere in this manual, shall be prepared using ground level dimensions.

The use of reference files is preferred unless explicitly requested otherwise. All files used as reference files shall be provided and documented. Each MicroStation V8 design file shall contain one model per design file. Design history shall not be enabled.

43.5 Categories of Digital Data Exchange

Table 43.2 Digital Data Exchange Categories

Field Control Data	Data in this category are used to establish survey control in the field. Field control points are physical points collected in the field, not points created by a designer. Data must be provided in the coordinate system specified for the project. Points to include are those with feature codes classified as field control in FDM 9-25-10.
Existing Surface Data	This category includes existing surface data. It is created from data collected in the field and used by design.
Existing Topography - General	This category includes point and figure information pertaining to topographic information, other than utilities. This includes but is not limited to, fences, tree lines, and waterways.
Existing Topography - Utilities	This category includes point and figure information pertaining to utilities such as gas, telephone, and storm sewer. WisDOT standard feature codes shall be used for the data in this category.
Reference Line Data	This category includes all mainline and side road reference line data, and the project control necessary to establish such reference lines.
Reference Profile Data	This category includes profiles of any reference lines as specified for the project.
Superelevation Data	This category includes information on locations of the superelevation transition points along an alignment. The minimum number of transition points, which must be included, are the beginning and ending of normal crown, reverse crown, and the beginning and ending of full superelevation.
Right-of-Way Monumentation Data	This category includes all existing and proposed right-of-way alignments and points to be staked including those considered to be FEE, PLE or TLE locations. This data is only the right-of-way information as submitted in the let project and should not be relied on as current right-of-way data.
Proposed Roadway Features	This category includes proposed physical features of the roadway. This includes but is not limited to edge of pavement, shoulder edges, curb and gutter, and slope intercepts.
Proposed Surface Models	This category includes all data associated with proposed design surfaces. It includes the following: - Complete surfaces for each feature model in design - Outer boundaries of the surfaces - Longitudinal breaklines and surface points that create the surfaces
Proposed Cross Section Data	This category includes cross section data of the proposed datum surface. Surface feature names in the cross section files must follow department standards. All cross section data submitted must have corresponding reference line information submitted as well.
Other Survey Data	This category of data is for those survey items not included in any of the other categories.
Graphical Information	Information in this category is contained in MicroStation DGN files or AutoCAD Civil 3D DWG files not defined in another category. It contains both DGN/DWG files used to create plan sheets, and DGN/DWG files which contain the plan sheets themselves.

43.5.1 Digital Data Formats

For each of the data categories, standard digital formats have been established. The acceptable formats for each category are described below. Note that any standard format in the various categories must be accepted. Unless a mutual agreement has been made between the consulting firm performing the project work and the appropriate region office, a preferred format cannot be mandated.

Table 43.3 Digital Data Exchange Accepted Formats by Category

	AutoCAD Civil 3D format (design files)	AutoCAD Civil 3D format (Contractor Data files)	MicroStation/CAiCE/SDMS format (design and contractor files) 1
Field Control Data	Civil 3D survey points and survey figures in a format to be imported into or in a survey database (*.xml, *.pac, *.sdb) *.wsi file Raw data files from data collectors Appropriate field collection notes See FDM 9 for more information.	Basic AutoCAD files and LandXML v. 1.2 exported from Civil 3D object files	SDMS Control (CTL) file format with a hard copy tie sheet noting locations (unless noted on plan). CAiCE Project File (KCP) format with a hard copy noting location of ties.
Existing Surface Data	SRV file from Central Office Technical Services Civil 3D surface object Civil 3D survey points and survey figures in a format to be imported into or in a survey database (*.xml, *.pac, *.sdb) Raw data files from data collectors Appropriate field collection notes	Basic AutoCAD files and LandXML v. 1.2 exported from Civil 3D object files. AutoCAD files will include files of: - 3D Faces of surface triangles - 2D or 3D polyline of surface boundary	Full set of CAiCE surface files CAiCE SRV file format SDMS Calculated File (CAL) format with RTO or COM task. XX, YY, and ZZ values for points, and point connectivity for all discontinuities must be provided in the file. Point connectivity for all discontinuity lines provided using FG number or OD number ONLY.
Existing Topographic Data - General and Utilities	AutoCAD Civil 3D DWG file from Central Office Technical Services Civil 3D survey points and survey figures in a format to be imported into or in a survey database (*.xml, *.pac, *.sdb) Raw data files from data collectors Appropriate field collection notes	Basic AutoCAD files of topography files.	SDMS CAL file format using WisDOT standard feature codes with point connectivity for all discontinuity lines provided using FG number or OD number ONLY. MicroStation DGN file
Reference Line Data	Civil 3D alignment objects in a DWG.	LandXML v. 1.2 files exported from Civil 3D alignments. This file should also contain the profiles and superelevations. A single LandXML alignment/profile file per LET project is preferred.	SDMS Alignment File (ALI) format, version 3.4 - SDMS Alignment File formats previous to version 3.4 will not be accepted. CAiCE KCP, KCM, and HA# format CAiCE Describe Chains Report (to be included in contractor staking packet, in addition to above items)
Design Profile Data	Civil 3D profile objects in a DWG.	LandXML v. 1.2 files exported from Civil 3D profiles. This file should also contain the alignments. A single LandXML alignment/profile file per LET project is preferred.	CAiCE Project File (KCP) format SDMS Profile File (PRO) format
Superelevation Data	AutoCAD Civil 3D DWG file using alignments with superelevation.	CSV exported from Civil 3D	SDMS Superelevation File (SUP) format

[1] See FDM 19-10-43.1.1 for acceptable timeframe

Right-of-Way Monumentation Data	Civil 3D point, alignment, and parcel objects in a DWG. Parcel objects shall have Owner information and Interest required filled out. Volume/Page/Document information should be filled out when known.	LandXML v. 1.2 files exported from Civil 3D existing and proposed right of way and easement alignments. A single LandXML RW alignment file per LET project is preferred.	SDMS Control File (CTL) format submitted along with a full size (22" x 34") plat noting point locations - this format must be provided when transferring data to be used in survey CAiCE KCM file format
Proposed Roadway Features	2D Civil 3D and/or AutoCAD objects (alignments and 2D polylines preferred)	Basic AutoCAD files of 2D polylines.	
Proposed Surface Models	Civil 3D surfaces built from corridors refined with feature lines and gradings as needed.	LandXML v. 1.2 files and the following AutoCAD features exported from Civil 3D surfaces into individual Basic AutoCAD files: - 3D Faces of surface triangles - 2D or 3D polylines of surface boundary - 3D polylines and COGO points of features that created the surface	
Proposed Cross Section Data	Civil 3D section view groups and associated layouts in a DWG.	Datum surface slope stake reports for all cross section groups in the plan. See FDM 19-10 Attachment 43.4 for creation method and format.	CAiCE Cross Section (EAR) file along with an SDMS ALI file SDMS Calculated File (CAL) format with XSE task, along with an SDMS Alignment File (ALI) format (SDMS version 3.4 or higher) Generic Station-Offset-Elevation file (example format provided in this chapter) along with an SDMS Alignment File (ALI) format (SDMS version 3.4 or higher)
Other Survey Data	Civil 3D survey points and survey figures in a format to be imported into or in a survey database (*.xml, *.pac, *.sdb) Raw data files from data collectors Appropriate field collection notes	Only if applicable, basic AutoCAD files exported from Civil 3D survey points and survey figures.	CAiCE Project (KCP) File Format CAiCE KCM file format CAiCE SRV file format MicroStation DGN file SDMS Calculated File (CAL) format with RTO or COM task. XX, YY, and ZZ values for points, and point connectivity for all discontinuities must be provided in the file. Point connectivity for all discontinuity lines provided using FG number or OD number ONLY.

Graphical Information	AutoCAD Civil 3D DWG file Usage of WisDOT line types, fonts, layers and other display characteristics. Data must be located in applicable coordinates and be coordinate correct.	Not applicable	Acceptable format is the MicroStation DGN file, where the files submitted must follow all CADD standards outlined in Chapter 15 of the FDM including: File must be a 2D file Usage of WisDOT user defined line styles and font libraries Data must be located in applicable coordinates and be coordinate correct. Usage of shared cells is not allowed. The use of reference files is allowed, unless explicitly requested otherwise. All reference files attached must be provided and documented.

43.6 Standard Formats Which are ASCII Formats

Each digital format that is ASCII is described here. In addition, for all SDMS format file types listed, further information on the specific formats can be found in the AASHTOWare SDMS Technical Data Guide prepared by AASHTO. A copy of this guide is available online at:

ftp://www.ahtd.ar.gov/outgoing/surveys_data/CadManage/AASHTO SDMS Technical Data Guide.pdf

from AASHTO.

43.6.1 CAiCE SRV File Format

The general format for point information in a CAiCE SRV file is:

<X> <Y> <Z> <Feature Code> <Point Number>

Example, 140542.690 42415.412 201.653 XYZ PT25477

Survey chain or discontinuity line information stored in a CAiCE SRV file begins with the line:
BEGIN <Name of Chain> <Feature Code of Chain>

Example, BEGIN CH1345 DL

For each point that comprises the survey chain/discontinuity line, an entry is made in the CAiCE SRV file of the format

<X> <Y> <Z> -1 <Point Number>

To indicate the end of the survey chain/discontinuity line the word END must appear.

An example of a complete survey chain/discontinuity line entry is shown below:

```
BEGIN CH1345 DL
140851.738 42345.465 201.730 -1 PT26419
140847.835 42347.467 201.759 -1 PT26420
140844.927 42350.116 201.744 -1 PT26421
END
```

A CAiCE SRV file with both point and survey chain/discontinuity line information example is shown here.

```
140566.672 42414.609 201.376 XYZ PT25480
140574.670 42414.336 201.376 XYZ PT25481
140582.666 42414.065 201.361 XYZ PT25482
BEGIN CH1345 DL
140851.738 42345.465 201.730 -1 PT26419
140847.835 42347.467 201.759 -1 PT26420
140844.927 42350.116 201.744 -1 PT26421
END
140590.662 42413.796 201.237 XYZ PT25483
140598.653 42413.528 201.339 XYZ PT25484
```

Include metadata at the top of a CAiCE SRV file to define information related to the coordinates in the file. Any format can be used for the metadata as long as each line is preceded by the “#” symbol. The example shown

below is used at WisDOT.

#AC:PR
#ID:0000-00-00
#CL:PROJECT
#PR:ANY TOWN - ANY TOWN
#HY:USH00
#CO:COUNTY
#HD:NAD 83 (1991)
#CS:WCCS
#ZN:4803
#VD:NGVD 29
#HT:ORTHO
#UL:M
#VR:CONMET/MANUAL DATA ENTRY
#RE:SURVEYOR - DISTRICT 0 TOWN
#DT:10/21/94

43.6.2 CAiCE Project File (KCP)

The CAiCE Project File format has many components to it. Any given CAiCE Project File may contain one or more of these components. The attributes of each component are given in Attachment 43.7, as well as an example CAiCE Project File below.

A CAiCE Project File (KCP) that contains one survey point and one survey chain is shown here.

```
*** SURVEY POINT ***
PN: A1
XC: 2474935.113084
YC: 359280.650779
ZC: -99999.900000
ZN: 1
JN: -1
AT: G
GM: P
FC: DTRE
AN: 0
```

```
*** SURVEY CHAIN ***
CN: EB1
ST: 0.000000
ZN: 1
JN: 4
AT: G
FC: EB
AN: 0
CP: EB1008-1025
```

43.6.3 Generic Station-Offset-Elevation File

Station-Offset-Elevation files can be created in many ways, but the generic format that will be accepted as part of this data standard lists the <Station> <Offset> <Elevation> for each point on a cross section. An example SOE file is given here.

```
10+00.000 -2.742 663.874
10+00.000 1.178 663.872
10+00.000 12.266 664.240
10+00.000 16.493 664.268
10+00.000 63.048 662.855
10+00.000 65.550 662.745
10+00.000 72.809 661.907
11+00.000 -37.280 660.425
11+00.000 -25.218 660.502
```

SDMS control file information defines horizontal control points, vertical benchmark points and calculated points to be staked. The basic structure of this SDMS format is given below.

Data Item	Description
AC:xx	Any activity data item marking the beginning of a control point.
PN:xx	Unique Point Number – no alpha characters allowed
YC:xxxxxxx.xxx	Northing (Y coordinate)
XC:xxxxxxx.xxx	Easting (X coordinate)
ZC:xxxxxxx.xxx	Elevation (Z coordinate)
PD:control point	Point Description
…	Other data items

The first data item of a control point must be the activity data item. Other data items can be in any order.

43.6.4 SDMS Alignment File (ALI) Format

SDMS alignment files contain highway alignment information. Two different ALI definitions exist; however, only the PI definition of the ALI format will be accepted. This definition precludes alignments with station equations, compound curves, and PC/PTspirals that cannot be handled by the SDMS PC/PT defined alignments. The basic structure of the SDMS ALI format is given below.

Data Item	Description
TY:PI	Indicates that the PI definition is used to define the alignment and is required. If this data item is omitted, the PC/PT definition is assumed.
AC:PR	Project header activity in which valid SDMS tags are used to detail metadata such as horizontal and vertical datums, coordinate systems, zones, units of length, etc.
AC:EQ	Station equations are optional, but if provided define the location of a station equation point. All equations must be listed in the order they appear in the alignment and cannot be located on a curve or spiral element.
PN:#	Identifies the point used for the equation point (Optional).
SB:###+##	Defines the station back of the equation point (Optional).
ST:###+##	Defines the station ahead of the equation point (Optional).
PD:, CM:, FE:	Point description, comment, feature code. All other tags in the shot are ignored, but can be included for documentation purposes.
AC:xx	Alignment description begins here.
PN:nnn	Point number (Optional)
ST:nn+nn,n	Station value at the beginning of the alignment.
XC:xxxxx.xxx YC:xxxxx.xxx	The origin point of the alignment (required)
ZC:	The elevation (Optional).

SI:xx	SI:PI is the point where two tangent lines meet. It defines the circle arc segment. A shot ID should be entered for each segment.
AC:xx	Activity for the next segment in the alignment.
PN:nnn	Point number (Optional)
ST:nn+nn,n	The stationing of each intermediate PI for the horizontal alignment being defined (Optional).
XC:xxxxx.xxx YC:xxxxx.xxx	Defines the X and Y coordinates of the starting point of the alignment and is required.
ZC:xxxxx.xxx	The elevation (Optional).
RA:nnn	Defines the radius of a curve.
PD:, CM:	Point description, comment. All other tags in the shot are ignored, but can be included for documentation purposes.

Subsequent segments repeat as necessary, beginning with AC:xx

43.6.5 SDMS Vertical Alignment File (PRO) format

SDMS Vertical Alignment files define VPI points by station and elevation. The information in this file is used in conjunction with highway alignment data. Symmetrical and assymetrical vertical curves at a VPI are specified by defining the length of the parabolic curve along the station axis. The first and last VPI cannot have vertical curves. The basic structure of the SDMS PRO format is given below.

AC:PR	Project header activity in which valid SDMS tags are used to detail metadata such as horizontal and vertical datums, coordinate systems, zones, units of length, etc.
AC:EQ	Station equations are optional, but if provided define the location of a station equation point.
PN:#	Identifies the point used for the equation point (optional).
SB:###+##	Defines the station back of the equation.
ST:###+##	Defines the station ahead of the equation.
PD:, CM:, FE:	Point Description, Comment and Feature Code.
AC:xx	Alignment description.
PN:nnn	Point number, which is optional.
ST:nn+nn	Stationing value at the beginning of the alignment.
XC:xxxxxx.xxx	X coordinate of beginning point of the profile.
YC:xxxxxx.xxx	Y coordinate for the beginning point of the profile.
ZC:xxxxxx.xxx	The elevation of the beginning point of the profile.
SI:VPI	VPI for the point at the beginning and end of the profile and where two vertical slope lines meet.
L1:xxxx	Defines the length of the vertical curve from the VPC to the VPI along the station axis.
L2:xxxx	Defines the length of the vertical curve from the VPI to the VPT along the station axis. Value will equal L1 with symmetric curves.

AC:xx	The description of the next segment begins here. Use any activity data item except AC:PR or EQ. REQUIRED.
PN:nnn	Point number (optional)
ST:nn+nn,n	Stationing of second VPI of the profile.
XC:xxxxxx.xxx	X coordinate of the second VPI on the profile.
YC:xxxxxx.xxx	Y coordinate of the second VPI on the profile.
ZC:xxxxxx.xxx	The elevation of the second VPI on the profile.
SI:VPI	Same as above.
L1:xxxx	Same as above.
L2:xxxx	Same as above.
AC:	Repeat as above to define each VPI in the profile.

43.6.6 SDMS Superelevation File (SUP) format

An SDMS Superelevation file defines the slopes to be used at a station and elevation to determine the left and right side slopes of the design section at any station along the alignment. The basic structure of this SDMS format is given below.

Data Item	Description
AC:PR	Project header activity in which valid SDMS tags are used to detail metadata such as horizontal and vertical datums, coordinate systems, zones, units of length, etc.
AC:EQ	Station equations are optional, but if provided define the location of a station equation point.
PN:nnn	Point number used for the equation point.
SB:###+##	Station back of the equation.
ST:###+##	Station ahead of the equation
PD:; CM:; FE:	Point description, comments and feature codes.
AC:xx	Alignment description begins here.
ST:nn+nn	Beginning stationing value at the beginning or within the stationing defined by the alignment.
E1:xxxx	Superelevation slope rate on the left side (0.02).
E2:xxxx	Superelevation slope rate on the right side (0.02).
PD:, CM:	Can be used to say what the transition is as in CM:End Normal Crown.
AC:xx	New activity is used for each change in superelevation transition being defined.
ST:nn+nn,n	Stationing value for the transition being defined.
E1:xxxx	Superelevation slope rate on the left side (0.02).
E2:xxxx	Superelevation slope rate on the right side (0.02).
PD:, CM:	Can be used to say what the transition is as in CM:Begin Full Super.
AC:	Repeat activities as required to define superelevation transitions.

43.7 SDMS Calculated File Formats and General Rules of Standard Tasks

Many of the standard file formats listed in this document are SDMS Calculated (CAL) file formats using various SDMS tasks and activities. The guidance given here can be supplemented by referring to the more complete descriptions outlined in the AASHTOWare SDMS Data Structure Overview document.

Only the XSE (Cross Section Task), RTO (Radial Topography Task) and the COM (Combined Task) tasks are considered standard for purposes of digital data transfer from consultant to WisDOT. Not all options available for each task will be accepted as part of the standard. The exceptions and general rules for the format allowable for each task are outlined below.

1. Only certain activities are allowed to be used under a given task. Refer to the TASK.TGS file and the AASHTOWare SDMS Data Structure Overview document for the definitions of what restrictions exist for each task.
2. Only two SDMS tags are allowable in WisDOT standard SDMS Calculated files to define connectivity. The first is OD, which stands for Origin/Destination and it defines the PN to which the PN of the current activity is to be connected. The second is FG, which is the Figure Number. Using this method, each chain is assigned a unique figure number and every measured point that is part of a chain is tagged with the figure number of that chain. Rules for using the OD or FG method can be found in the AASHTOWare SDMS Data Structure Overview document. Currently, the Chain and Taping Activities are not part of the data standards defined here, but may be implemented at a later date.
3. The RTO task allows one or more radial sideshots to be taken from one or more occupied stations. The required and optional activities and example CAL files using RTO task can be found in the AASHTOWare SDMS Data Structure Overview document.
4. The TRA task allows for control traversing and trigonometric leveling. The required and optional activities and an example CAL file using the TRA task can be found in the AASHTOWare SDMS Data Structure Overview document.

5. The COM task allows for control traversing, trigonometric leveling and simultaneous collection of sideshots. The required and optional activities and an example CAL file using the COM task can be found in the AASHTOWare SDMS Data Structure Overview document.
6. The XSE task is used to define station, offset and elevation values for points located along an alignment. The required and optional activities and an example CAL file using the XSE task can be found in the AASHTOWare SDMS Data Structure Overview document.
7. For survey data, the CAL file must contain measurement data. If data was not collected using SDMS software, the raw survey data file must also be included.

Required Header Information for All SDMS File Formats

All SDMS files submitted, regardless of the task, must contain the following header information:

```
AC:PR
ID:(8 character project ID 0000-00-00)
PR:(from-to)
HY:(highway designation)
CO:(county name)
DT:(mm/dd/yy)
CM:(Select one) METRIC or ENGLISH
UL:(Unit of Length- Select one) F or M
CM:--HORIZONTAL INFORMATION-
CM:(Select one)GRID or GROUND
CF:1.00
HD:(Hz datum- Select one) NAD 83(91) or NAD 27 or NAD 83(97)
CS:(Value for Coordinate System such as WSPCS, WCCS, ASSUMED)
ZN:(Zone- State 48## or County 92##)
CM:--VERTICAL INFORMATION---
VD:(Vert Datum- Select one) NGVD 29 or NAVD88
HT:(ORTHOmetric vs. ELLIPsoid)
```

For SDMS Cross Section files, the following additional header line must also be included:

```
CM:Cross section limits ### TO ###
```

43.8 Guidelines on Data Requirements by Project Type

The following guidelines have been established so that region personnel writing consultant contracts can determine what type of digital data is needed for each specific consultant project.

Each highway improvement project is unique, but most can be defined by one of the eight general categories listed below.

1. Bridge Rehabilitation
2. Bridge Replacement
3. SHRM
4. Resurface
5. Pavement Replacement
6. Reconditioning
7. Reconstruction
8. Expansions and Majors

Each project has its own unique digital data needs. Therefore, digital data requirements should ultimately be determined on a project-by-project basis during project scoping. Only that data which is anticipated to be needed later should be requested so as not to detract from the intent of the requirement.

The table below lists recommendations for data to be requested for each project type.

Table 43.4 Recommended Electronic Project Data by Project Type

	Bridge Rehab.	New / Repl. Bridge	SHRM	Resurf.	Pav't Repl.	Recond.	Reconst.	Expansion & Majors
Field Control Data	X	X			X	X	X	X
Existing Surface Data	X	X			X	X	X	X
Existing Topographics					X	X	X	X
Reference Line Information	X	X	X	X	X	X	X	X
Design Profile Information	X	X			X	X	X	X
Superelevation Information		X New Only	X	X	X	X	X	X
Right of Way Monumentation		X New Only				X	X	X
Proposed Roadway Features		X New Only			X	X	X	X
Proposed Work Surface Models	X	X			X	X	X	X
Existing and Proposed Cross Sections	X	X			X	X	X	X
Other Survey Data								
Graphic Files		X New Only			X	X	X	X

In the category of Other Survey Data, no recommendation on when to request this data is given in the table. This data category is used only when required survey information does not fall into any of the other categories, which is not generally predictable.

It should be assumed that all graphical files needed to recreate the entire plan set are required on projects where graphical files are requested. Individual contracts may specify less Graphical Information when warranted.

On projects where earthwork is paid lump sum, or if a job has less than 10 cross sections, a graphical representation of the proposed cross section may be sufficient. However, it is recommended that all Pavement Replacement and Reconditioning projects require one of the electronic cross section data formats given.

43.9 Electronic Project Data Confirmation

After receiving electronic project data from a consultant, this data must be confirmed by personnel at the appropriate region. This confirmation involves verification that the formats of the files sent follow the standard formats outlined in this procedure. The confirmation does not imply that the electronic data received matches the information shown on the plan submitted as part of the PS&E, nor does it verify that the design is valid and follows design standards set by the Department. The confirmation does not release the consultant from responsibilities related to the constructability and validity of the design. The confirmation of electronic project data must take place within a month of receipt of the data from the consultant.

After the data has been received and verified, a letter confirming the receipt and acceptance of this data will be sent to the consultant by the appropriate region. A copy of the confirmation checklist is shown in Attachment 43.2 and Attachment 43.8.

43.10 Contractor Data Packet

The region assigned personnel or consultant designer should create a Contractor Data Packet for each LET project. Data required for a project is dependent on the scope of the project. See Table 43.4 for recommended data by project type. Accepted file formats are dependent on the design software used. See Table 43.3 for accepted formats. Expected deliverables and responsibilities are defined in CMM 7-10.3.

43.10.1 Delivery

After the PS&E has been reviewed and corrected, but no later than 8 weeks prior to project LET date, consultants shall submit the entire Contractor Data Packet directly to the regions. The Contractor Data Packet shall be zipped into a single file and named <ConstructionID>-contractor-data.zip.

All data types required by this procedure shall be on a single portable electronic media device compatible with Windows. Media with a USB connector or read-only on CD or DVD optical drive are acceptable. Media on blu-ray discs is not acceptable. The consultant must maintain a copy of the data that is submitted. The consultant must check the data for accuracy and certify it to be correct before delivery to the region. The Contractor Data Packet shall also contain a meta-data document that lists all files contained on the disc.

43.11 Project Archive

Once electronic project data has been submitted, it is then the responsibility of the Department to store the data in a project directory in the CADDS Filing Cabinet where it can later be checked out for use by Department personnel working on that project.

Upon receipt of electronic project data from consultants, the following procedure should be followed to validate and archive the data. The procedures outlined in Attachment 43.2 or Attachment 43.8 are performed by assigned personnel in the appropriate region.

LIST OF ATTACHMENTS

Attachment 43.1	Civil 3D Metadata Sheet for WisDOT Project
Attachment 43.2	Civil 3D Electronic Data Checklist
Attachment 43.3	Civil 3D Describe Alignment Report
Attachment 43.4	Civil 3D Slope Stake Report
Attachment 43.5	Civil 3D Specific Design Deliverable Requirements
Attachment 43.6	MicroStation/CAiCE Metadata Sheet for WisDOT Project
Attachment 43.7	CAICE Project File Component Attributes
Attachment 43.8	MicroStation/CAiCE Consultant Data Check-In Form
Attachment 43.9	CAiCE Format Report on Alignment/Reference Line Details
Attachment 43.10	CAiCE Slope Stake Report Example
Attachment 43.11	CAiCE Format Report on Alignment/Reference Line Details

FDM 19-10-45 Changes to Consultant Plans *February 25, 2011*

45.1 Purpose

To establish procedural guidelines to be followed when changes are required to plans developed by consultants. The guidelines are intended to assure that all inputs are recognized and considered and that all parties are appropriately involved and have necessary documentation available to them.

45.2 Statement of Problem

Consultants who have designed plans for WisDOT administered projects are concerned that, on occasion, the plans have been changed without their knowledge or input. The consultant's concern is primarily directed to significant design concepts or detail changes. When plans are changed without the consultant's knowledge the design may be compromised or local input may be circumvented.

Other less significant, but important changes have on occasion, been necessary and made without communication with the consultant. The consultants want to be informed of these type of changes also because they are liable for the complete design.

The consultant community has also expressed a need to be informed of all secondary or "housekeeping changes." In these cases, important knowledge and opportunity for education will be missed unless the consultant is informed.

The consultant community is concerned about liability, reputation and the opportunity to gain experience and knowledge. In the spirit of the consultant community being a supplement to the WisDOT staff, these guidelines are being established to enhance two-way communications between the consultant designer and WisDOT design and construction staff relative to plans and contract documents.

45.3 Project Development

Regular meetings between the consultant and WisDOT staff during project development appear to reduce the need for changes to the final plan. Improved communications should be the goal.

45.3.1 Pre-Final Plan

To permit time for an orderly review process without creating a crisis situation, the consultant should submit a pre-final roadway plan to the respective region a minimum of two months before the PS&E is due at the region office. The plan should include quantities, traffic control and the majority of construction details.

There should be frequent communications between the designer in the consultant's office and the project reviewer/coordinator in the region office during the final plan work by the consultant.

45.4 Region Activities

The complete PS&E is due at the region office a minimum of 4 weeks prior to the scheduled CO PS&E due date. If the PS&E documents, including final plans, arrive at the region office by the scheduled date they will be given priority attention. If the PS&E documents arrive late the region reviewer/coordinator will be involved with other scheduled work and the PS&E review will wait until time can be scheduled, perhaps resulting in a missed letting date.

During the final plan/PS&E review, communications should be directly between the region reviewer/coordinator and the project designer. The consultant's staff should make all corrections and/or changes that are required. If possible, the corrections/changes should be made and submitted by the consultant electronically to avoid delaying the project. If the region staff feel they must correct or change a consultant plan, they review the proposed changes with the consultant's staff The region shall then send copies of the revised plan sheets to the consultant, along with a brief summary of the changes/corrections.

If possible, the consultant should make the corrections/changes in the region office, to avoid rescheduling the project. If changes or corrections are suggested by CO, the region should contact the consultant to discuss the concept of the requested changes. The region will then respond to the CO. The consultant should make any corrections or changes at this time as described above.

Appropriate consultant staff should be invited to the region office to review the marked print and draft sample proposal after it is received from the CO.

The region should review the preliminary electronic data file list, provided by the consultant, to determine if the consultant has identified all necessary files. If any additional files are needed the region should document them and provide and updated list to the constant. The consultant then submits electronic copies of all data files on the updated list to the region after final review of the plan by CO.

Copies of bridge plans from central office bridge should be forwarded to the consultant after review by region staff. A copy of the final plan and a copy of the final sample proposal should be forwarded to the consultant by the region when they are received from the central office. A copy of any addendum issued during the advertising period should be forwarded to the consultant by the region when they are received from the CO.

45.5 Bureau of Structures Activities

Completed structure plans should be submitted to the Structures Design Section a minimum of two months before the PS&E date. The reviewer may contact the consultant during review process to get additional information to justify non-standard or unusual details.

After checking the final structure plans, the consultant plan reviewer in central office will contact the consultant as necessary to resolve discrepancies.

All plans receive an additional cursory review by the Chief Structural Design Engineer before being submitted to the Proposal Management Section. This review is primarily to determine the need and adequacy of special provisions and the consistency of bid items. Changes in bid items are normally editorial in nature and the consultant is not contacted.

Substantive changes, involving structural elements and details, are discussed with the consultant.

45.6 Bureau of Project Development

PS&Es should not be submitted to BPD unless they are complete and checked by the consultant and region. Region/consultants should not anticipate making additions or corrections after submittal nor expect that BPD staff will catch errors/oversights during the review.

Substantive changes should be discussed between CO project development engineers and region design personnel. Editorial changes for clarity and correction of errors can be discussed between the CO plan

examiners and region reviewer/ coordinator. Two factors need to be considered:

1. Time is critical at this stage of review.
2. Judgment must be used in determining if detailed type changes of small significance need to be discussed.

Drafting work to repair plans will, in general, be done by the consultant/region. The designer will be in charge of the work not the CO plan examiner. Arrangements for consultants to do the work will be coordinated through the respective region.

45.7 Post Letting Activities

Minor changes to better fit field conditions will be made by construction staff without contacting the consultant. The consultant should be contacted along with department staff when considering contractor initiated Cost Reduction Incentive proposals. If a proposed change is significant, or if the solution to a problem is not obvious, the consultant should be contacted as well as various department personnel.

Construction staff should forward a copy of the post construction critique of the plan and proposal to the design consultant after the region design staff has added their comments.

When available, the consultant may review the as-built plans and contract change order file in the region office.

FDM 19-10-50 Rejected Bids and Revisions of PS&E

February 25, 2011

50.1 Revisions of PS&E

50.1.1 Plan Review

Plans will be reviewed in BPD using the checklist found in FDM 19-40-1. BPD plan examiners will coordinate changes with region staff who will submit revised plans or individual sheets.

50.1.2 Addenda

The region will make any plan changes on CADDS and send the revised plans to BPD as PDF files formatted to be 8 ½ X 11 inches (see FDM 15-5-10 and FDM 19-22-1).

50.2 Rejected Bids

When a PS&E is submitted for reletting after bids are rejected from an earlier letting, the plan letter should include only the information that is different from the original transmittal. Explain the kind of work in the contract (e.g., grading, base, structure, etc.) and what has been changed, such as plan details, special provisions and/or specification requirements, prosecution and progress, and makeup of the contract(s).